Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	37364	spreader	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 11:34
L2	15	spreader near3 "PN" near3 generator	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 11:38
L3	2	2 and narrow near3 band	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 11:35
L4	42	narrow near3 band and spreader and "PN" near3 generator	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 11:44
L5	0	receiv$3 near3 narrow near3 band and spreader and "PN" near3 generator and transmit$5 near3 wideband near3 (cdma or spread$4 near3 sequence)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 11:49
L6	0	receiv$3 and narrow near3 band near3 spreader and "PN" near3 generator and transmit$5 near3 wideband near3 (cdma or spread$4 near3 sequence)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 11:49
L7	0	receiv$3 and narrow near3 band near3 spreader and "PN" near3 generator and transmit$5 and wideband near3 (cdma or spread$4 near3 sequence)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:04
L8	3	receiv$3 and narrow near3 band and spreader and "PN" near3 generator and transmit$5 and wideband near3 (cdma or spread$4 near3 sequence)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:13
L9	9	("5319672" | "5555268" | "5583851" | "5640385" | "5956345" | "6141332" | "6256290" | "6269126" | "6275509"). PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:07
L10	0	receiv$3 and narrow near3 band and (wideband or wideband) near3 spreader and "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:16

L11	16	receiv$3 and narrow near3 band and (wideband or wideband) and spreader and "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:20
L12	145	receiv$3 and narrow near3 band and (wideband or wideband) and "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:31
L13	18	receiv$3 and narrow near3 band and cdma and spread$4 near3 "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:35
L14	1	demodulat$3 near3 narrow near3 band and cdma and spread$4 near3 "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:36
L15	6	receiver$3 near3 narrow near3 band and cdma and spread$4 near3 "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:37
L16	1173	demodulat$5 near3 (FM or narrow near3 band) and spread$4 (FM or narrow near2 band) and "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:38
L17	17	demodulat$5 near3 (FM or narrow near3 band) and spread$4 near3 (FM or narrow near2 band) and "PN" near3 generator and transmit$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/18 12:38
L18	9	("5101417" | "5691666" | "5694417" | "5712870" | "5745531" | "5878087" | "5940435" | "6263013" | "6314128"). PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:43
L19	7	("5048053" | "5121407" | "5241562" | "5457713" | "5477195" | "5544155" | "5574754").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:46
L20	7	("5048053" | "5121407" | "5241562" | "5457713" | "5477195" | "5544155" | "5574754").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:52
L21	12	(FM or narrow) near3 receiver and spreader	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:54
L22	1	(FM or narrow near3 band) near3 receiv$3 and spreader near3 pn near2 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:55

L23	0	spread$4 near3 (FM or narrow near3 band) and spreader near3 pn near2 generator and spreader near3 transmitter	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:56
L24	2	spread$4 near3 (FM or narrow near3 band) and spreader near3 pn near2 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:57
L25	1	demodulat$5 near3 (FM or narrow near3 band) and spreader near3 pn near2 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 12:59
L26	2	demodulat$5 near3 (FM or narrow near3 band) and spreader near3 shar$5	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:00
L27	0	FM near3 receiver and spreader near3 pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:00
L28	1	narrow near3 receiver and spreader near3 pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:01
L29	1	narrow near3 receiv$3 and spreader near3 pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:01
L30	1	narrow near3 spreader and spreader near3 pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:24
L31	1	receiv$4 near3 narrow and spreader near3 narrow and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:25
L32	0	decod$4 near3 narrow and spreader near3 narrow and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:25
L33	12	demodulat$4 near3 narrow near3 band and spread$4 near3 narrow and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:28
L34	3	receiv$4 near3 narrow near3 band and spread$4 near3 code near3 narrow and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:31
L35	15	receiv$4 and spread$4 near3 narrow near3 band and spread$4 near3 pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:35
L36	1	antenna near3 narrow near3 band and spread$4 near3 pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:35
L37	2	antenna near3 FM and spread$4 near3 pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:39
L38	1	spreader near3 (FM or narrow) near3 input$1 and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:40

L39	0	spreader near3 receiv$5 near3 (FM or narrow) and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:40
L40	2	spreader near4 (FM or narrow) and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:41
L41	120	spread$3 near4 (FM or narrow) and pn near3 generator	US-PGPUB; USPAT; USOCR	OR	ON	2005/04/18 13:41

United States Patent [19]

Schilling

[11] Patent Number: 5,469,468

[45] Date of Patent: * Nov. 21, 1995

[54] **OVERLAYING SPREAD-SPECTRUM SATELLITE SYSTEM AND METHOD**

[75] Inventor: **Donald L. Schilling,** Sands Point, N.Y.

[73] Assignee: **Interdigital Technology Corporation,** Wilmington, Del.

[*] Notice: The portion of the term of this patent subsequent to Sep. 27, 2011, has been disclaimed.

[21] Appl. No.: **127,261**

[22] Filed: **Sep. 27, 1993**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 622,235, Dec. 5, 1990, Pat. No. 5,351,269.

[51] Int. Cl.^{6} **H04K 1/00**

[52] U.S. Cl. **375/200; 375/202; 375/205; 380/34**

[58] Field of Search 380/34; 375/1; 455/12.1, 33.1; 379/59

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Primary Examiner—Tod R. Swann
Attorney, Agent, or Firm—David Newman & Associates

[57] **ABSTRACT**

A spread-spectrum satellite system for communicating data and paging messages to a plurality of remote units. The spread-spectrum communications system has a satellite with an antenna beamwidth located within a same geographical region as covered by an existing FDMA, TDMA or other mobile-satellite system. The spread-spectrum satellite system has a device for converting the format of the data into a form suitable for communicating over radio waves, a spread-spectrum modulator for spread-spectrum processing the data, and a transmitter for transmitting the spread-spectrum-processed-converted data from the satellite to a remote unit. The remote unit has an antenna and a spread-spectrum receiver for recovering data communicated from the satellite. The remote unit optionally may have a comb filter for notch filtering mobile channels of the mobile-satellite system.

25 Claims, 13 Drawing Sheets